

Washington State Institute for Public Policy

Benefit-Cost Result

Deploy one additional police officer with hot spots strategies

Benefit-cost estimates updated December 2015. Literature review updated October 2013.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our technical documentation.

Program Description: This broad group of studies estimates the effectiveness of hot spots policing (compared to statewide average practices), primarily in urban jurisdictions in the United States. Hot spots policing concentrates policing in high crime areas or on specific crimes such as drug trafficking. This strategy differs from "traditional" policing, which typically relies on random preventative patrol or response to calls for service.

Benefit-Cost Summary							
Program benefits		Summary statistics					
Participants	\$0	Benefit to cost ratio	\$5.98				
Taxpayers	\$70,153	Benefits minus costs	\$473,523				
Other (1)	\$510,915	Probability of a positive net present value	100 %				
Other (2)	(\$12,499)						
Total	\$568,570						
Costs	(\$95,047)						
Benefits minus cost	\$473,523						

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2014). The economic discount rates and other relevant parameters are described in our technical documentation.

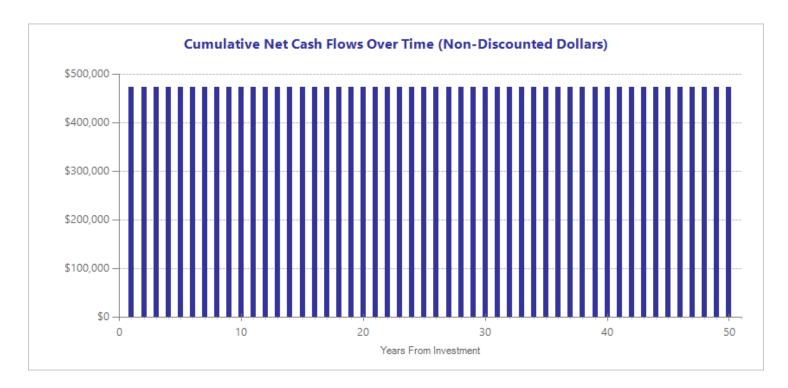
Detailed Monetary Benefit Estimates								
Source of benefits	Participants	Bo Taxpayers	enefits to Other (1)	Other (2)	Total benefits			
From primary participant Crime Adjustment for deadweight cost of program	\$0 \$0	\$70,153 \$0	\$510,915 \$0	\$35,324 (\$47,822)	\$616,392 (\$47,822)			
Totals	\$0	\$70,153	\$510,915	(\$12,499)	\$568,570			

We created the two "other" categories to report results that do not fit neatly in the "participant" or "taxpayer" perspectives. In the "Other (1)" category we include the benefits of reductions in crime victimization, the economic spillover benefits of improvement in human capital outcomes, and the benefits from private or employer-paid health insurance. In the "Other (2)" category we include estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

Program costs \$90,927 1 2011 Present value of net program costs (in 2014 dollars) (\$95,047) Comparison costs \$0 1 2011 Uncertainty (+ or - %) 20 %

After consulting leading researchers in this area, we found that reliable estimates for the cost of hot spots strategies are not available. Therefore, we increased the cost of a police officer by 5% to capture the estimated additional costs associated with hot spots deployment.

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta analysis. The uncertainty range is used in Monte Carlo risk analysis, described in our technical documentation.



Meta-Analysis of Program Effects											
Outcomes measured	Primary or secondary participant	No. of effect sizes	Treatment N	Unadjusted effect size (random effects model)		Adjusted effect sizes and standard errors used in the benefit- cost analysis First time ES is estimated Second time ES is estimated					
				ES	p-value	ES	SE	Age	ES	SE	Age
Crime elasticity: property	Primary	n/a	0	0.000	0.001	-0.763	0.116	n/a	-0.351	0.123	n/a

Citations Used in the Meta-Analysis

Evans, W.N., & Owens, E.G. (2007). COPS and crime. Journal of Public Economics, 91(1-2), 181.

Levitt, S.D. (2002). Using electoral cycles in police hiring to estimate the effects of police on crime: Reply. *The American Economic Review, 92*(4), 1244-1250. Lin, M. (2009). More police, less crime: Evidence from US state data. *International Review of Law and Economics, 29*(2), 73-80.

McCrary, J. (2002). Using electoral cycles in police hiring to estimate the effect of police on crime: Comment. *The American Economic Review, 92*(4), 1236–1243.

Shi, L. (2009). The limit of oversight in policing: Evidence from the 2001 Cincinnati riot. Journal of Public Economics, 93(1), 99-113.

Worrall, J.L., & Kovandzic, T.V. (2010). Police levels and crime rates: An instrumental variables approach. Social Science Research, 39(3), 506-516.

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Washington State Institute for Public Policy

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